ENVIRONMENTAL CHEMISTS

Date of Report: 07/06/99 Date Received: 06/24/99

Project: Metro Self Monitor, PO# M62185

Date Samples Extracted: 07/01/99 Date Extracts Analyzed: 07/02/99

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	Chromium	Copper	<u>Nickel</u>	Zinc
M62185	0.21	0.20	0.15	0.09
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

ENVIRONMENTAL CHEMISTS

Date of Report: 07/06/99 Date Received: 06/24/99

Project: Metro Self Monitor, PO# M62185

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 906114-01 (Duplicate)

				Relative		
	Reporting	Sample	Duplicate	Percent	Acceptan	ce
Analyte	Units	Result	Result	Differenc	e Criteria	ì
Chromium	mg/L (ppm)	0.21	0.17	21a	0-20	
Copper	mg/L (ppm)	0.20	0.16	22a	0-20	
Nickel	mg/L (ppm)	0.15	0.13	14	0-20	
Zinc	mg/L (ppm)	0.09	0.06	40a	0-20	

Laboratory Code: 906114-01 (Matrix Spike)

		Reporting	Spike	Sample	% Recov	ery	% Recover	y Acceptance		
	Analyte	Units	Level	Result	MS	4.3	MSD	Criteria	RPD	
4. Ī	Chromium	mg/L (ppm)	5	0.21	97		86	80-120	12	
	Copper	mg/L (ppm)	5	0.20	96		82	80-120	16	
	Nickel	mg/L (ppm)	10	0.15	99		93	80-120	6	
	Zinc	mg/L (ppm)	5	0.09	99		99	80-120	0	

Laboratory Code: Laboratory Control Sample

		Reporting	Spike	e % Recov	ery % Recov	ery Acceptanc	е	
Analyte	e e e e e e e e e e e e e e e e e e e	Units	Leve	l LCS	LCSI) Criteria	· · .]	RPD
Chromium		mg/L (ppm)	5	100	100	80-120		0
Copper		mg/L (ppm)	5	102	103	80-120		1
Nickel		mg/L (ppm)	10	98	103	80-120		5
Zinc		mg/L (ppm)	5	98	103	80-120		5

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

July 6, 1999

DUPLICATE COPY

INVOICE #99ACU0706-3

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M62185: Results of testing requested by Gerry Thompson for material submitted on June 24, 1999.

FEDERAL TAX ID (b) (6)

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

906114

MM 6-24-99

SAMPLE CHAIN OF CUSTODY

Send Report To	w Copper U	works	ishin •	Contact	Gorald A	Thomas
Address 628	Agriface SU					√ − 1
City, State, Zip		98439				
Phone # 206- 382-8	7779	FAX #	206-38	2-4705	Date 6-24	<u>-59</u>
SITE NO.		PROJ	ECT NAME	mattern - 14 and .	PURCHASE (ORDER#
72,38		netro Ser	ld mo-	itar	m 62185	
SAMPLERS (signature)	<i></i>				PROJECT LO	CATION
Short HZ			· ·		DOO CH K	
REMARKS					SAMPLE DISPOSAL	INFORMATION
				•	Dispose after : Return Sample	s
	D-4-/T!	<u> </u>			Can for moud	
Sample #	Date/Time Sampled	Type of Sample	# of Jars	Lab Sample #		alyses uested
m 62185	424/88 1250	HZO		\mathcal{O})	Cecuni	ا لدح زا
				-		
	·					
		1111				
		W-14.4				
CICNION IDE 4		TAYO ALARAM		6015		
SIGNATURE Relinquished by	PI	RINT NAME		COMPANY	Date	Time
KISI —	TEAR	A. Thong	250	ACW	6/20/00	12.52
Received by:	i Hiley	1 1	~\ ~\	Z + B	10c 6600	
Relinquished by:	- 11,001			1 7 1	(me 2/24)	97 12:521
Received by:						
1						

FORMS/COC

06/22/99

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

July 6, 1999

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on June 24, 1999 from your Metro Self Monitor, PO# M62185 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Manuel Marti Project Manager

Enclosures